

Please enter these calibration parameters and the Lot No. into the BioLecton software!

pH calibration parameters Lot No.2213201 (BioLector II/Pro Microbioreactor, filter module ID-221/421)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ min	69.35	69.25	69.16	69.07	68.97	68.88	68.78
φ max	21.98	21.90	21.81	21.73	21.65	21.57	21.48
dpH	0.70	0.70	0.70	0.70	0.70	0.70	0.70
pH ₀	5.90	5.89	5.88	5.87	5.85	5.84	5.83

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ min	68.69	68.59	68.50	68.40	68.31	68.22	68.12
φ max	21.40	21.32	21.24	21.15	21.07	20.99	20.91
dpH	0.70	0.70	0.70	0.69	0.69	0.69	0.69
pH ₀	5.82	5.80	5.79	5.78	5.77	5.75	5.74

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ min	68.03	67.93	67.84	67.74	67.65	67.56	67.46
φ max	20.82	20.74	20.66	20.58	20.49	20.41	20.33
dpH	0.69	0.69	0.69	0.69	0.69	0.69	0.69
pH ₀	5.73	5.72	5.70	5.69	5.68	5.67	5.65

pH sensor properties

Dynamic range	pH 3.55 - 7.70
Resolution	Up to 0.01 pH (software)
Accuracy	± 0.25 pH at pH 4.25 - 4.70 ; ± 0.1 pH at pH 4.70 - 6.55 ; ± 0.25 pH at pH 6.55 - 7.00 (batch calibration)
Response time (t ₉₀)	At 25 °C < 30 s
Drift at pH = 7	< 0.005 pH per day (sampling interval of 6 min)
Temperature range	5 °C to 50 °C
Compatibility	Aqueous solutions, ethanol, methanol (max. 5 % v/v)
Sensor stability	Sensor material can be degraded by some microorganisms
Cross-sensitivity	Reduced to ionic strength (salinity); high concentration of fluorescent molecules in the visible range can interfere (GFP, (e)YFP); complex media can cause a pH-shift (peptone, yeast extract)
Basic material	pH sensor LG1-2212-01 (at least stable for 7 days with CertiPUR-buffer) pH sensors are light-sensitive; please protect them from direct light!

pH calibration

Buffer	CertiPUR Reference Material Buffer solutions Set (pH 2.00 ± 0.02 / pH 3.00 ± 0.02 / pH 9.00 ± 0.03 / pH 10.00 ± 0.03, 20 °C); 150 mM Citrat-Na-Phosphate buffer (16 solutions)
Settings	BioLector protocol = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	pH -360.63 (pH Ser. 3513, gain 8)
Date of calibration	2022-10-10

Contact us

If you have any questions, contact Beckman Coulter Customer Support Center:

- Worldwide, find out in our website at: www.beckman.de/support/technical
- In the USA and Canada, call us at 1-800-369-0333
- Outside the USA and Canada, contact your local Beckman Coulter representative

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DO calibration parameters Lot No.2213201 and 2213281 (BioLector II/Pro Microbioreactor, filter module ID-228/428)

Temperature	20°C	21°C	22°C	23°C	24°C	25°C	26°C
φ cal0	70.27	70.25	70.23	70.21	70.19	70.17	70.15
φ cal100	40.94	40.71	40.48	40.26	40.03	39.80	39.57

Temperature	27°C	28°C	29°C	30°C	31°C	32°C	33°C
φ cal0	70.13	70.11	70.09	70.07	70.05	70.03	70.01
φ cal100	39.34	39.11	38.88	38.66	38.43	38.20	37.97

Temperature	34°C	35°C	36°C	37°C	38°C	39°C	40°C
φ cal0	69.99	69.97	69.95	69.93	69.91	69.89	69.87
φ cal100	37.74	37.51	37.29	37.06	36.83	36.60	36.37

DO sensor properties

Dynamic range	0 - 100 % air saturation (a.s.)
Resolution	Up to 0.1 % O ₂ (software)
Accuracy	± 5% dissolved oxygen (batch calibration)
Drift at 0% oxygen	< 0.5% O ₂ per day (sampling interval of 6 min)
Response time (t ₉₀)	< 30 s
Temperature range	5 – 50°C
Sensor stability	Sensor material can be degraded by some microorganisms
Cross-sensitivity to	Organic solvents, such as acetone, toluene, chloroform or methylene chloride, Chlorine gas; high concentration of fluorescent molecules in the visible range can interfere (mCherry, tdTomato, dsRed, Nile red); complex media can cause a DO-shift
Basic material	Oxygen sensor RF-222756995 (at least stable for 7 days with CertiPUR-buffer) DO sensors are light-sensitive; please protect them from direct light!

DO calibration

Calibration	Two-point calibration at an oxygen-free environment (1.0 M sulfite system) and an air-saturated environment (21% oxygen with QC buffer)
Settings	BioLector protocol = pH_DO_calibration_BOH2 ,T = 20-40 °C, 800 rpm, 1000 µL/well, shaking diameter 3 mm, MTP-type = Flower Plate (MTP-48-BOH2)
Calibration device	Hardware ID: 03166164 (BLXT Pilot 1)
Calibration phase offset	DO -360.94 (DO Ser. 4452, gain 4)
Date of calibration	2022-10-10

Sterilization procedure

Sterilization	Beta irradiation (20 kGy)
BGS-certificate No	1085201
Date of sterilization	2022-09-27

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